## **B.S. DATA SCIENCE 2019-20**

FRESHMAN	SOPHOMORE		JUNIOR		<u>SENIOR</u>	
Fall (14 cr) Spring (16 cr)	Fall (15 cr)	Spring (16 cr)	Fall (16 cr)	Spring (15 cr)	Fall (15 cr)	Spring (15 cr)
CS 1410 Intro. Object Oriented Programming  4 FA/SP  CS 2100 Discrete Structures 3 FA/SP	CS 2420 Intro. Algorithms and Data Structures  4 FA/SP	CS 3500 Software Practice 4 FA/SP	DS 3190 Foundations of Data Analysis 3 FA	DS 5140 Data Mining 3 SP	DS 4800 Senior Capstone Project (Design) Or	DS 4850 Senior Capstone Project
WRTG 2010 Intermediate Writing 3 FA/SP/SU  DS 2500 Data Wrangling 3 SP	CS 2420 Intro. Algorithms and Data Structures  4 FA/SP  Elective Data Domain 3 FA/SP  MATH 3070 Applied Statistics I 4 FA/SP/SU  MATH 2270 Linear Algebra 4 FA/SP/SU  MATH 2270 Linear Algebra 4 FA/SP/SU	Elective Data Analysis Breath 3 FA/SP	CS 4150 Algorithms 3 FA/SP	DS 5530 Database Systems 3 SP	DS 4940 Undergraduate Research	DS 4970 Undergraduate Thesis
MATH 1310 Engineering Calculus I  4 FA/SP  MATH 1320 Engineering Calculus II  4 FA/SP/SU	MATH 3070 Applied Statistics I 4 FA/SP/SU	MATH 3080 Applied Statistics II 3 SP	DS 5630 Visualization for Data Science 3 FA	Elective Data Analysis Breath 3 FA/SP Pre-reg: WRTG 2010	CS 5350  Machine Learning  3 FA/SP	Elective Data Analysis Breath 3 FA/SP
General Education  3 FA/SP/SU  General Education  3 FA/SP/SU  3 FA/SP/SU	MATH 2270 Linear Algebra 4 FA/SP/SU	American Institutions  3 FA/SP/SU	DS 3390 Ethics in Data Science 3 FA	WRTG 3014 or WRTG 3015 3 FA/SP/SU	Elective Data Domain 3 FA/SP	General Education 3 FA/SP
General Education 3 FA/SP/SU	v to apply to the p	General Education 3 FA/SP/SU	Elective Data Domain 4 FA/SP	General Education (3000+) 3 FA/SP/SU	General Education 3 FA/SP/SU	General Education 3 FA/SP/SU
Grey = Pre-Major Courses  Check handbook.cs.utah.edu for application requirements and instructions  Prerequisite: C- or higher in CS 1030, AP  = CS-A score of 4 or higher; or a passing score on CS 1410 Proficiency Test  Course prerequisites are located on the back of this flowchart					DV Requirement 3 FA/SP/SU	IR Requirement (3000+) 3 FA/SP/SU